6DS5

Beam Power Tube

7-PIN MINIATURE TYPE

For Audio Output Service in TV and Radio Receivers

ELECTRICAL CHARACTERISTICS – Bogey Values[a]

Heater Voltage, ac or dc	E_h	6.3	V
Heater Current	I_h	0.8	A
Direct Interelectrode Capacitances:[b]			
Grid No.1 to plate	c_{g1-p}	0.19	pF
Input: G1 to (K, G3, G2, H)	c_i	9.5	pF
Output: P to (K, G3, G2, H)	c_o	6.3	pF

TYPICAL OPERATION AND CHARACTERISTICS

Cathode-Bias Operation

For the following characteristics, see Conditions below:

Zero-Signal Plate Current	I_b	34.5	27	mA
Max.-Signal Plate Current	$I_{b(max.-sig.)}$	32.5	25	mA
Zero-Signal Grid-No.2 Current	I_{c2}	3.5	3	mA
Max.-Signal Grid-No.2 Current	$I_{c2(max.-sig.)}$	9	9	mA
Plate Resistance (Approx.)	r_p	28000	28000	Ω
Transconductance	g_m	6000	5800	µmho
Load Resistance	R_l	6000	8000	Ω
Total Harmonic Distortion	D_t	10	10	%
Max.-Signal Power Output	P_o	2.8	3.6	W
Conditions:				
Heater Voltage	E_h	6.3	6.3	V
Plate Supply Voltage	E_{bb}	200	250	V
Grid-No.2 Voltage	E_{c2}	200	200	V
Cathode-Bias Resistor	R_k	180	270	Ω
Peak AF Grid-No.1 Voltage	e_{c1m}	7.5	9.2	V

Fixed-Bias Operation

For the following characteristics, see Conditions below:

Zero-Signal Plate Current	I_b	35	29	mA
Max.-Signal Plate Current	$I_{b(max.-sig.)}$	36	32	mA
Zero-Signal Grid-No.2 Current	I_{c2}	3	3	mA
Max.-Signal Grid-No.2 Current	$I_{c2(max.-sig.)}$	9	10	mA
Plate Resistance (Approx.)	r_p	28000	28000	Ω
Transconductance	g_m	6000	5800	µmho
Load Resistance	R_l	6000	8000	Ω

Total Harmonic Distortion	D_t	9	10	%
Max.-Signal Power Output	P_o	3	3.8	W
Conditions:				
Heater Voltage	E_h	6.3	6.3	V
Plate Voltage	E_b	200	250	V
Grid-No.2 Voltage	E_{c2}	200	200	V
Grid-No.1 (Control-Grid) Voltage	E_{c1}	-7.5	-8.5	V
Peak AF Grid-No.1 Voltage	e_{c1m}	7.5	8.5	V

MECHANICAL CHARACTERISTICS

Dimensional Outline . . . . JEDEC 5-3
Maximum Overall Length . . . . 2.625 in (66.67 mm)
Maximum Seated Length . . . . 2.375 in (60.32 mm)
Maximum Diameter . . . . 0.750 in (19.05 mm)
Bulb . . . . T 5-1/2
Base . . . . . . Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Terminal Connections (See *TERMINAL DIAGRAM*) . . . . . JEDEC Designation 7BZ
Type of Cathode . . . . Coated Unipotential
Mounting Position . . . . Any

MAXIMUM RATINGS – Design-Maximum Values[c]

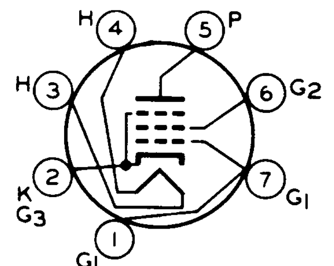
Plate Voltage	E_b	275	V
Grid-No.2 Voltage	E_{c2}	275	V
Grid-No.1 Voltage:			
Positive bias value	E_{c1}	0	V
Plate Dissipation	P_b	9	W
Grid-No.2 Input	P_{g2}	2.2	W
Heater Voltage	E_h	5.7 to 6.9	V
Heater-Cathode Voltage:			
Peak	e_{hkm}	+200	V
DC	E_{hk}	100	V
Envelope Temperature (At hottest point on envelope surface)	T_E	250	°C

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:	$R_{g1(ckt)}$		
For fixed-bias operation		0.1	MΩ
For cathode-bias operation		1.0	MΩ

a Unless otherwise specified.
b Without external shield. Measured in accordance with the current issue of EIA Standard RS-191.
c As defined in the current issue of EIA Standard RS-239.

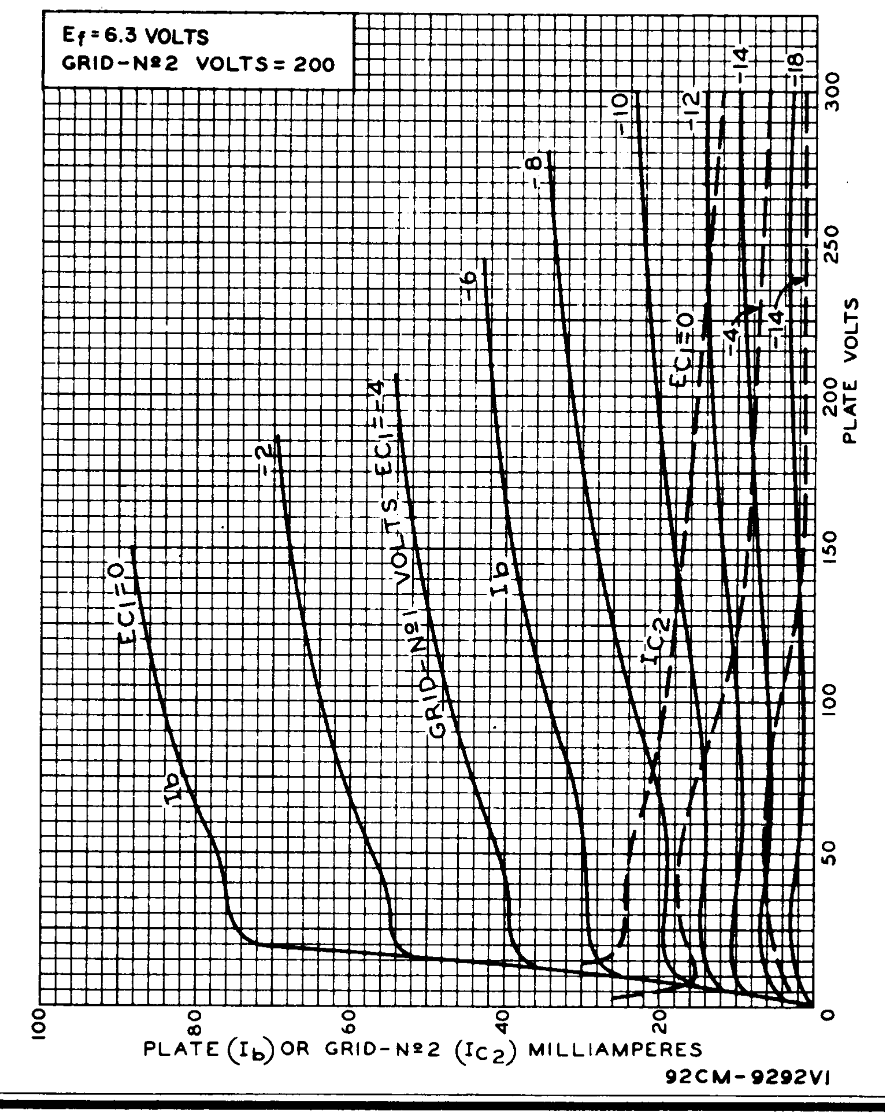
TERMINAL DIAGRAM - Bottom View



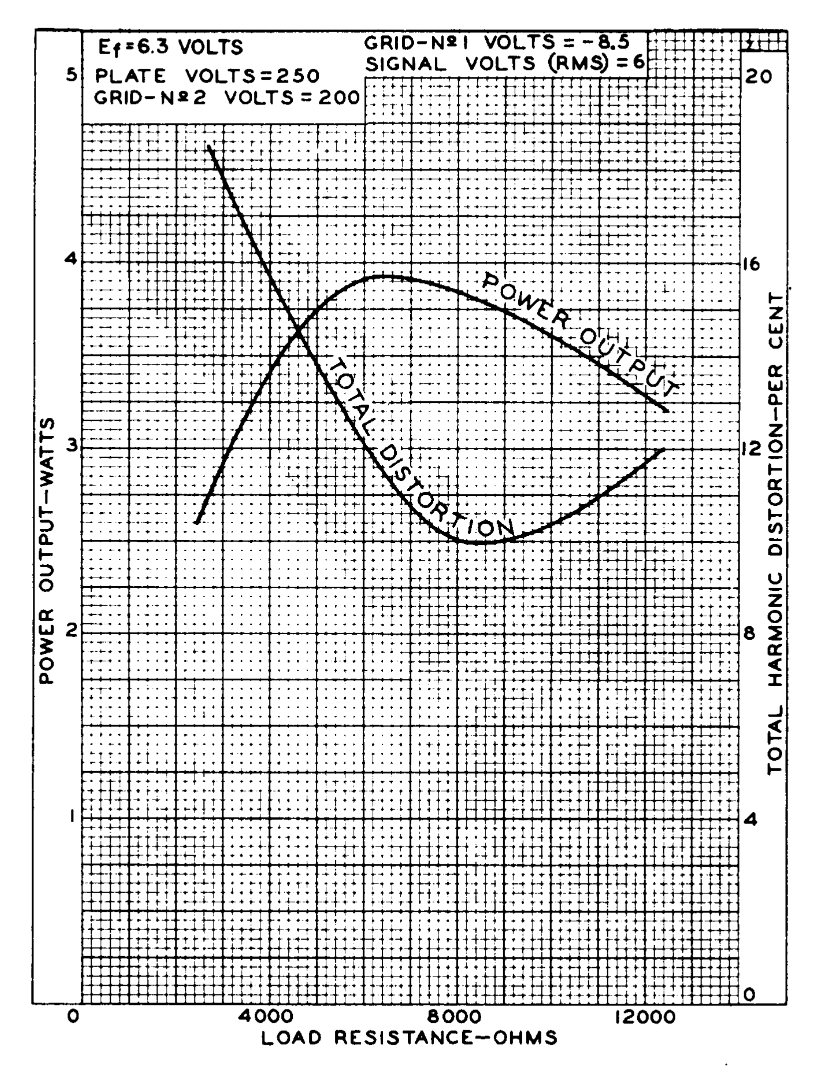
JEDEC 7BZ

Pin 1 - Grid No.1
Pin 2 - Cathode, Grid No.3
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Grid No.2
Pin 7 - Grid No.1

AVERAGE CHARACTERISTICS



OPERATION CHARACTERISTICS



92CM-9293VI